



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
1650 Arch Street  
Philadelphia, Pennsylvania 19103-2029**

Mark Hammond, Director  
Bureau of Air Quality  
Pennsylvania Department of Environmental Protection  
Rachel Carson State Office Building  
P.O. Box 2063  
Harrisburg, PA 17105-2063

Via email at [mahammond@pa.gov](mailto:mahammond@pa.gov)

Dear Mr. Hammond,

Thank you for the opportunity to review Pennsylvania's proposed Reasonably Available Control Technology (RACT) III Rule. The Environmental Protection Agency (EPA) appreciates Pennsylvania Department of Environmental Protection's (PADEP) efforts to meet the RACT requirements for the 2015 Ozone National Ambient Air Quality Standards (NAAQS). Our comments are included as an attachment to this letter.

These comments apply to the proposed State Implementation Plan (SIP) revision that will be submitted to EPA. Please note that EPA's failure to comment on a particular provision does not necessarily mean EPA is in agreement with the provision. EPA also reserves the option of raising additional issues based upon other comments received.

If you have any questions regarding the report, please do not hesitate to contact me at 215-814-2178, or have your staff contact Mike Gordon at 215-814-203 or [gordon.mike@epa.gov](mailto:gordon.mike@epa.gov).

Sincerely,

**CRISTINA  
FERNANDEZ**

Digitally signed by  
CRISTINA FERNANDEZ  
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Cristina Fernández, Director  
Air & Radiation Division

Cc: Viren Trivedi, Environmental Program Manager, Division of Permits, Bureau of Air Quality, PADEP (via email at [vtrivedi@pa.gov](mailto:vtrivedi@pa.gov))

## Attachment

### EPA Comments on Pennsylvania's Proposed Reasonably Available Control Technology (RACT) III Rule

1. Proposed 25 Pa Code 129.114(i) states: "Compliance with the requirements in § 129.99(a)—(h) (relating to alternative RACT proposal and petition for alternative compliance schedule) assures compliance with the DRAFT provisions in subsections (a)—(h), except for sources subject to § 129.112(b)(11), (h)(4), (h)(5) or (i) —(k)." This appears to be the regulatory provision by which PADEP will allow existing case-by-case RACT II permits to be approved, with a streamlined review process, as RACT for the 2015 ozone NAAQS, with exemptions for electric arc furnaces, Portland cement plants (specifically Nazareth), glass melting furnaces, lime kilns, and direct fired heaters. EPA's concern is that this language suggests that for the RACT II case-by-case sources, no additional analysis would be performed or required to determine whether the RACT II permit requirements meet RACT for the 2015 ozone NAAQS. Additional analysis is required before the case-by-case RACT II permits can be considered to meet the 2015 ozone NAAQS. EPA acknowledges that, for many sources with case-by-case permits, it is possible that since PADEP's last analysis for RACT II, no significant changes in technically and economically feasible control technologies have occurred. However, EPA stresses that PADEP's rulemaking record must contain a robust analysis supporting this approach to be defensible. A record containing a general survey and analysis of changes in the cost or effectiveness of existing nitrogen oxides (NOx) and volatile organic compounds (VOC) control technologies, or the development of new technologies, since the RACT II case by case determinations, along with a new review of case-by-case RACT II determinations using those controls, should be undertaken to determine whether the RACT II controls and limits remain RACT for the 2015 ozone NAAQS for those categories of sources. This analysis must be in the record. EPA also notes that this approach is best for "non-controversial sources," such as sources which were well below the dollar per ton of VOC or NOx threshold used for the case-by-case RACT II analysis of economic feasibility. EPA expects that certain sources/source categories may require some additional, case-specific analysis. For both categories of sources, the record should document that for each source or generic source category, the relevant control technologies and their costs have not changed significantly enough to alter the prior RACT II analysis, nor has the source had any significant changes to operations, emission levels, or any other site or source specific factors analyzed during the original determination for that source's RACT II permits. Under these conditions, a good case can be made that the previously established RACT II controls and limits continue to be RACT for the 2015 ozone NAAQS.

2. There appears to be no language limiting alternative final compliance dates (for example, but not limited to, 25 Pa Code 129.112(n)(2)(v) and 129.114(j)(2)(v)), which might allow for the implementation of RACT controls later than permitted by 40 CFR 51.1312(a)(3)(i) (i.e. no later than January 1 of the 5th year after designation, which is January 2023). Any extension of the compliance date beyond the January 2023 deadline is contrary to EPA's implementing regulations and is not approvable for purposes of RACT. Please identify the legal authority or guidance which PADEP is relying upon for extended the deadline for RACT compliance. If PADEP believes there are no changes that could be made within the statutory timeline that are economically and technically feasible, the record should support that no change is RACT for the particular source. Changes made at a later date would then be considered "SIP strengthening."

3. For sources with an existing case-by-case RACT II permit seeking to keep that RACT requirement or limitation for RACT III, what public participation process will PADEP provide for the public to comment upon whether the RACT II limit(s) remain RACT for the 2015 ozone NAAQS? Section 129.114(i) states:

*(i) Compliance with the requirements in § 129.99(a)—*

*(h) (relating to alternative RACT proposal and petition for alternative compliance schedule) assures compliance with the provisions in subsections (a)—(h), except for sources subject to § 129.112(b)(11), (h)(4) and (h)(5) or (i)—(k).*

If the language in 129.114(i) means that a source which is in compliance with a case by case RACT II permit issued under 129.99(a) – (h) is in compliance with the RACT III requirements, what supporting information will be in the record for the RACT III rulemaking showing that for all of these sources, there is no further reduction in the limits or tightening of the restrictions that is technically or economically feasible, or that some change has not happened at each of the sources that would call into question whether the limits in the RACT II permit still meet RACT for the 2015 ozone NAAQS?

Additionally, how will these RACT II permits be incorporated into the SIP for purposes of RACT III and implementation of the 2015 ozone NAAQS? Also, will these case-by-case RACT II sources have to apply using the process in section 129.114 for that determination? If so, section 129.114(f) states:

*(f) The proposed alternative RACT requirement or RACT emission limitation and the implementation schedule submitted under subsection (d) will be approved, denied or modified by the Department or appropriate approved local air pollution control agency in accordance with subsection (e) in writing through the issuance of a plan approval or operating permit modification prior to the owner or operator implementing the alternative RACT requirement or RACT emission limitation.*

This language suggests that PADEP or the approved local agency will be putting case-by-case RACT II permits that satisfy the 2015 ozone NAAQS RACT requirements out for public comment at the state/local level, then submitting those permits to EPA for approval into the SIP. Please explain the process for public comment on the determination that the previously issued case-by case RACT II permits continue to satisfy RACT for the 2015 ozone NAAQS.

4. As proposed, the RACT III requirements of 129.112—129.115 apply to:

- major facilities in existence before August 3, 2018 (129.111(a)).
- facilities which become major after August 3, 2018 due to a modification or change in operation of an existing sources (129.111(b)).

This language seems to say that if a facility was major before August 3, 2018 and adds a new NOx or VOC emissions unit after that date, the source (new emissions unit) would be subject to RACT under the 129.111(a) provision. However, the presumptive (129.111(a)(1)) and alternative (129.114(d)(1)) compliance dates for sources subject to RACT under 129.111(a) are firm and may have already passed at the time of new construction. Provisions allowing for compliance 6 months after the facility become major are only for those subject under 129.111(b). The language limiting the scope of applicability to modification of existing sources at a facility is only described at 129.111(b) as well. The implication of this regulatory text structure is that existing major sources must continually evaluate and immediately comply with RACT provisions for any new sources. This may be feasible for some presumptive requirements, but if the source requires a case-by-case determination, that may cause issues regarding compliance dates and present logistical problems for processing an undefined number of future case-by-

case RACT determinations. Each new project at a major facility would need to be evaluated for RACT. EPA's experience with PADEP's implementation of RACT II indicates that PA probably does not intend for RACT to be continually reapplied to new sources at major facilities—otherwise EPA would be seeing a growing number of case-by-case RACT II determinations for new projects occurring across PA. Based on PADEP's answer to the question below in its *Responses to Frequently Asked Questions* document for RACT II, it seems that PADEP does not intend for RACT to be continually reapplied to sources:

**Question:** *A facility exists prior to July 20, 2012, but the owner or operator of the facility constructs sources at that facility after July 20, 2012. Are those new sources subject to the RACT II rule?*

**DEP Response:** *No, the RACT II rule applies for the facility as it existed as of July 20, 2012. Therefore, only sources at the facility constructed on or before July 20, 2012 are subject to RACT II requirements. The only exception would be a facility that is a minor NOx and/or VOC emitting facility on July 20, 2012 that becomes a major NOx and/or VOC emitting facility after July 20, 2012 [see 25 Pa. Code §129.96(b)]. New facilities that come into existence after July 20, 2012 are not subject to the RACT II rule.*

Please clarify PADEP's intent for these particular provisions. Specifically, in the response above, is PADEP suggesting that new facilities that come into existence after July 20, 2012 are not subject to RACT at all? Or, would those new facilities be subject to a newer RACT standard? All new major sources of VOC or NOx in moderate or above nonattainment areas, and in the Ozone Transport Region (OTR), are required to have RACT level controls before operating. Depending on what PADEP's intent is for RACT III applicability for this circumstance, some potential solutions would be:

- clarifying the language in section 129.111(b)
- narrowing the scope of the section 129.111(a) applicability definition to exclude new sources at existing major facilities;
- defining a compliance date for new sources at existing major facilities in the presumptive and alternative RACT compliance date sections;

5. Section 129.113(n) appears to be new language added by Pennsylvania to alert sources using an averaging plan that the averaging plan will be submitted to EPA for approval. This language is probably intended to avoid the issue leading to the conditional approval for averaging plans in RACT II. How will PADEP determine whether the emissions from the two sources in the averaging plan are less than the emissions that would be emitted if both sources complied with presumptive RACT? Proposed section 129.113(d) requires that the permit applicant must demonstrate how it will show that emissions from the averaging plan are less than emissions that would be emitted if the sources in the averaging plan complied with their presumptive RACT limits. Will the averaging plan include terms requiring that this method of demonstrating compliance be part of a permit and enforceable?

6. The RACT III proposed regulations have added language requiring the submission of information by every source subject to RACT that appears to address some of the missing information that caused difficulties for both PADEP and EPA in evaluating RACT II permits. For example, section 129.115, entitled "Written notification, compliance demonstration and recordkeeping and reporting requirements," requires that every source subject to RACT notify the state within 6 months of how it is going to comply with the RACT III requirements, and requires these sources to identify those air

contamination sources that are [(a)(1)(i)], and are not [(a)(1)(ii)], subject to sections 129.112 - 129.114. Section 129.115(a)(4) also requires:

*(4) The following information for each air contamination source listed in paragraph (1): (i) A description, including make, model and location, of each source. (ii) The applicable RACT requirement or RACT emission limitation, or both, in §§ 129.112—129.114 for each source listed in accordance with paragraph (1)(i). (iii) How the owner or operator shall comply with subparagraph (ii) for each source listed in subparagraph (i). (iv) The reason why the source is exempt from the RACT requirements and RACT emission limitations in §§ 129.112—129.114 for each source listed in accordance with paragraph (1)(ii).*

This is more information than the regulations required for RACT II and RACT I (see comparison immediately below). However, given that RACT I and II did not require the same information, this difference would seem to put PADEP and local agencies in the position of figuring out whether any new emission sources have been added to the facility since the RACT I and II process, or whether sources have changed in any meaningful ways, such as a fuel switch, new control device, etc. EPA suggests that a provision should be added to this section requiring the source to clearly identify any changes to emission sources which have occurred since RACT II, at the least, and the effect that the change has on emissions from the facility, if any. The provision should also require an analysis of the impact of any such changes on prior RACT requirements. Having the sources provide this information will hopefully simplify PADEP's review of these notices. This is especially true for the sources that received a case-by-case RACT II permit, to simplify PADEP's analysis of whether there have been any changes at the facility which might require a new analysis for RACT III. For a RACT II alternative RACT proposal, section 129.99 says the following:

*(d) The owner or operator proposing an alternative RACT requirement or RACT emission limitation under subsection (a), (b) or (c) shall:*

*(1) Submit a written RACT proposal in accordance with the procedures in § 129.92(a)(1)—(5), (7)—(10) and (b) (relating to RACT proposal requirements) to the Department or appropriate approved local air pollution control agency as soon as possible but not later than:*

Section 129.92 (RACT I) states, in part:

*(a) Each RACT proposal shall, at a minimum, include the following information:*

- (1) A list of each source subject to the RACT requirements.*
- (2) The size or capacity of each affected source and the types of fuel combusted or the types and quantities of materials processed or produced in each source.*
- (3) A physical description of each source and its operating characteristics.*
- (4) Estimates of the potential and actual NO<sub>x</sub> and VOC emissions from each affected source and associated supporting documentation.*
- (5) A RACT analysis which meets the requirements of subsection (b), including technical and economic support documentation for each affected source.*
- (6) A schedule for completing implementation of the RACT proposal as expeditiously as practicable but not later than May 31, 1995, including interim dates for the issuance of purchase orders, start and completion of process, technology and control technology changes and the completion of compliance testing.*

*(7) The testing, monitoring, recordkeeping and reporting procedures proposed to demonstrate compliance with RACT.*

*(8) A plan approval application that meets the requirements of this article if required under § 127.11 (relating to plan approval requirements).*

*(9) An application for an operating permit amendment or application to incorporate the provisions of the RACT proposal.*

*(10) Additional information requested by the Department that is necessary for the evaluation of the RACT proposal.*

7. What dollar per ton figure is PADEP using for VOC and for NO<sub>x</sub> to determine if a RACT limit is economically feasible? The Technical Support Document (TSD) explanation on page 12 is confusing. It appears that PADEP is using \$3750/ton for NO<sub>x</sub> and \$7500/ton for VOC.

8. Please clarify whether PADEP used the most up-to-date chapters in the EPA Air Pollution Control Cost Manual when calculating costs. For example, PADEP cites a 2002 edition in one place ([PADEP] *evaluated cost-effectiveness using the guidance provided in the EPA Air Pollution Control Cost Manual, EPA/452/B-02-001, 6th Edition, January 2002, as amended,*) but on page 12 of the TSD, reference is made to the 7<sup>th</sup> edition of the Cost Manual.

9. The prior NO<sub>x</sub> emission standards for municipal waste combustors in 25 Pa Code 129.97 are proposed to be reduced from 180 parts per million volume (ppmv) to 150ppmv. DEP's analysis determined that additional controls (e.g. selective catalytic reduction/selective non catalytic reduction (SCR/SNCR)) were technically and/or economically infeasible. However, the record does not explain what measures will be necessary for the sources to meet the new limits and does not demonstrate that 150ppmv is the lowest rate that is technically and economically feasible. Several of the sources appear to be able of operating at lower emission rates. Please explain what analysis was performed to determine that 150ppmv is RACT for these units.

10. Section 129.114(i) states

*(i) Compliance with the requirements in § 129.99(a)—*

*(h) (relating to alternative RACT proposal and petition for alternative compliance schedule) assures compliance with the provisions in subsections (a)—(h), except for sources subject to § 129.112(b)(11), (h)(4) and (h)(5) or (i)—(k).*

Please note that we could not find section 129.112(b)(11). There also does not seem to be 129.112(h)(4) or (5), as Section 129.112(h) ends at (h)(3).

11. Because there is no presumptive RACT for large coal-fired electric generating units (EGUs) with SCR in section 129.112, section 129.114(a) would not seem to allow those sources to request a case-by-case RACT determination under the RACT III rules. PADEP should clearly notify the public when public noticing proposed case-by-case RACT II permits for coal-fired EGUs with SCRs that it intends to use the same limits to satisfy RACT for the 2015 ozone NAAQS, and that the RACT II comment period will be the last opportunity to comment on whether the RACT II limits also meet the RACT III requirements.